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OBSERVED CROSSING TIMES AT BORDER POSTS IN MOLDOVA 2014

ASSESSING THE IMPACT OF CUSTOMS SERVICE REFORMS ON TIME SPENT AT BORDER CROSSING POSTS (BCP)

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Acronyms and Definitions

AEO/TIR EPD lane	Dedicated lane for holders of simplified procedures/trusted economic agents
AEO/TIR EPD	Holder of simplified procedures/trusted economic agent
BCP	Border Crossing Point
BRITE	Business Regulation, Investment, and Trade Environment Project
Inbound	shows the direction of entering Moldova. It is used to describe trucks which enter into Moldova and the procedures they are followed.
Outbound	shows the direction of exiting Moldova. It is used to describe trucks which leave Moldova and the procedures they follow.
SP	Simplified procedures

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EXECUTIVE SUMMARY

Trading across borders became easier in 2014, compared to 2013, according to the Doing Business 2015 report, which credits Moldova with a significant improvement in the number of days to import and to export[1]. In parallel, BRITE conducted a follow-up assessment of the procedures at select border crossing points, or BCPs, in order to identify the main constrains in moving the goods faster across the border and whether changes implemented by the Moldova Customs Service in the last twelve months have had a positive effect on clearance times.

Some of these improvements include the introduction of electronic submission of export documentation, the acceptance of international weight certificates, and the addition of a dedicated AEO/EPD lane used for select transporters and holders of simplified procedure designation[2]. Other improvements include a policy to clear Green Lane shipments in no more than 20 minutes.

Among all processes analyzed, the weighing, X-ray scanning, bank office and the Border Police inspection seem to be the most independent from factors like BCP infrastructure, weather, or time of day. The averages for these processes are more or less homogeneous and converge to the general averages.

Other processes like queues, customs procedures, phyto-sanitary and veterinary inspections depend very much on the BCP and its infrastructure, on the way the work is organized inside the BCP, on the type of declaration, and on weather conditions. In some cases, the ASYCUDA or Unipass system failed for a period, which caused some disturbances, but these cases were infrequent.

Overall, if compared to the 2013 study, the time to cross BCPs has declined in most cases. In Annex 1 and Annex 2 the comparative data show that loaded trucks spend less time in BCPs in all cases[3], no matter the BCP or the type of declaration. Some improvements are noteworthy, like at Sculeni BCP, where the outbound trucks with T1 or TIR declarations were processed three times quicker than in 2013. The inbound trucks with import declarations were processed between 40-42% (Leuseni and Sculeni BCPs) and 61-64% (Otaci and Leuseni BCPs) quicker compared to 2013.

Electronic export declarations were introduced only in March 2013, but the data revealed that they soon could become the most frequently used type of declarations. For instance, of the observed trucks at Otaci BCP, 80 had e-export declaration, 90 had TIR declaration, and only 38 had T1 and Export. However, crossing times were longer for these declarations.

The data also revealed some other interesting results. Empty trucks, for example, stay longer than in 2013, at all BCPs, no matter the direction, with the one exception of outbound trucks

[1] For exporting, the duration decreased from 32 to 23 days, for importing: from 35 to 27 days.
[2] This is valid till October 2014, when new concept: Authorized Economic Operator was introduced after completing the data collection.
[3] Exception: inbound trucks with TIR declarations at BCP Sculeni and with T1 declarations at BCP Leuseni.

at Leuseni. In some cases, like for inbound trucks at Otaci BCP, the time almost doubled. Time for Border Police inspection, in general, increased for inbound trucks, but decreased for outbound trucks. However, the average time for this procedure is not very significant – less than 4 minutes for outbound trucks and less than 11 minutes for inbound trucks. Customs procedures are performed faster for all inbound trucks, compared to 2013, but for some outbound trucks, the average times increased (at Tudora and Leuseni BCPs).

Fewer trucks are scanned using the X-ray scanner and fewer trucks are weighed compared to 2013, and even for those that go through this procedure the time is shorter than before.

Key findings:

- The weighing time is about 2-3 minutes, however, the queues could take add up to 10-11 more minutes.
- Border Police inbound inspection with the waiting time take between 10 and 20 minutes, depending on the infrastructure and the number of trucks in BCPs
- Inbound customs procedures are made faster at Otaci and Tudora BCPs, no matter the type of declarations.
- With some exceptions, empty trucks spend less time for inbound customs procedures, than loaded ones.
- Less than 16% of loaded trucks require phyto-sanitary and/or veterinary inspections. There is no statistically significant evidence that the trucks with one of this inspections spend, on average, more time for customs procedures, than other loaded trucks.
- The AEO/TIR EPD lane is used only by 13% of trucks and it's faster than the usual lanes.
- More trucks with simplified procedures pass the usual lane rather than the AEO/TIR EPD lane.
- Holders of simplified procedures, in most cases, spend less time for inbound customs procedures than the other loaded trucks.
- Based on observations at BCP Leuseni, weather conditions influence the time of the inbound customs procedures, increasing it by about 5% for loaded trucks and almost three times for empty ones.
- The inbound customs procedures are about the same for T1 and Import declarations, the trucks with TIR declarations spend less time.
- The bank office processes a client request in 2-3 minutes and queues are rare.
- Comparing to 2013, the queue at Leuseni is much shorter, but the BCP itself is more crowded. Generally, at all BCPs, queues were relatively short or absent.
- Outbound customs procedures and outbound Border Police inspection takes less time than inbound ones. Trucks spend more time for outbound customs procedures at Leuseni BCP, comparing to the other three BCPs observed.
- Electronic export declaration is already popular, but trucks spend more time for customs procedures with this type of declaration at Tudora, Otaci and Sculeni BCPs, compared to other type of declarations. At Leuseni BCP, e-export declarations are faster than T1 and TIR types of declarations.

- X-ray scanning is not applied evenly across all observed BCPs. At Otaci BCP it's absent; at BCP Leuseni most trucks are scanned, while at Tudora and Sculeni BCPs – only selected trucks. Time spend on average by a truck for this procedure is about 14-19 minutes, depending on BCP.

Limitations of the 2014 study compared to 2013:

- The results of this study, unlike 2013, do not disaggregate the inbound and outbound customs procedures by times to input, register and validate the declaration, which should be extracted from ASYCUDA.
- The period of time between 10 PM and 8 AM was not observed and no additional data from ASYCUDA were provided to measure this period.
- The averages obtained might not be representative for any month of the year for a given BCP. However, the results show a good estimation of time spent at BCPs for each procedure, due to a large amount of observations collected.
- The results from 2014 are presented so as to be comparable to observed data from 2013. However, one should be aware about averages based on limited number of observations. Usually, Leuseni BCP could be taken as a benchmark for comparative analysis because of the more developed infrastructure and larger number of trucks.

METHODOLOGY

Data collection and description of BCP procedures timed

This section defines the methodology and data collection procedures used to calculate the time it takes trucks to clear BCPs. Additionally, results and discussion points are presented at the end of the section.

Key factors analyzed in the BCP timing study

Several criteria were analyzed to ensure a broader representativeness of the data. Below are the main variables we considered in our assessment:

a. *Direction:* Inbound and Outbound.
b. *Observation time:* between 8:00 and 12:00; 13:00 – 17:00 and 18:00 – 22:00.
c. *Declaration type:* T1, TIR, Import/Export clearance at border, E-import/E-export.
d. *Other inspections:* phyto-sanitary and veterinary.
e. *BCPs:* Leuseni-Albita (Romania), Tudora-Starokazacie (Ukraine), Otaci-Moghiliv Podoliski (Ukraine) and Sculeni-Sculeni (Romania).
f. *SP:* holders and not holders.
g. *Lane at BCP:* AEO/EPD lane or usual lane for trucks.
h. *Truck load status:* empty or loaded.

For the purpose of calculating BCP clearance time, the process was first defined and broken down into sub-processes. Additionally, the main factors affecting BCP clearing were identified.

The methodology covers only the time the trucks spend at the BCP, and does not take into account the time for transit and the time at the internal customs terminals.

From a process standpoint, the BCP time was broken into seven parts for all directions:

1. **Inbound weighing and Border Police inspection**. Here we measured the time it takes a truck to get to the Border Police inspection point, then to enter the queue for weighing, time spent in queue and time spent for weighing.
2. **Inbound Customs Procedures -** time spent by a truck near the Customs building when entering Moldova. Here we had two sources of information: the operators timed how much the truck spend near the building and if the truck passed the AEO/EPD lane or not and from the Customs Inspectors we got information about the type of declaration, if the truck is empty or loaded, if some phyto-sanitary or veterinary inspection was performed and if the company benefited of simplified procedures.

3. **Bank office -** Time spent at bank office in both directions. The time necessary to stay in the queue and to be served was calculated for any individual, either physical person or a representative of a legal person.
4. **Outbound queue to enter the BCP**. The estimation of the time was made based on the length of the queue, which was monitored once in 15 minutes and the speed of entering BCP (cars/minute), based on number of cars which entered each 3 minutes.
5. **Outbound weighing**. Time spent by a truck in BCP before going to the queue, time spent in the queue and for weighing was calculated.
6. **Outbound customs procedures and Border Police inspection**. Here we had two sources of information: the operators timed how long the truck spends near the building, the time necessary to perform the inspection by the Border Police, and also if the truck passed the AEO/EPD lane or not. The Customs Inspectors provided the information about the type of declaration, if the truck is empty or loaded and if the company benefited of simplified procedures.
7. **X-ray scanning** (RAPISCAN). This time was assessed only for exiting Moldova.

DATA COLLECTION

Six BRITE observers visited each BCP during 7 full days, having a total of about 168 hours of observations at each BCP during the following periods:

- Otaci : 2 to 8 September 2014
- Tudora: 12 to 18 September 2014
- Leușeni: 22 to 28 September 2014
- Sculeni: 2 to 8 October 2014

For each of the seven processes, the observers had special forms were they filled in the times in an hh:mm:ss format each truck stopped for any of the agreed steps. This allowed us to determine the time between these moments when analyzing the data.

Most of the timing process was made through direct observations, with the exception of the data provided by customs inspectors, which filled in a form (see Annex 1) with information regarding the type of declaration, type of inspections performed, and whether the company was a holder of simplified procedures. No data from ASYCUDA were provided.

RESULTS AND FINDINGS

Description of the results by each of the seven main processes analyzed and sub-processes

From the logistical standpoint, each BCP could have been monitored by analyzing seven main processes for inbound and outbound trucks. Our methodology could not reach the following times:

- Time spent at the opposite BCP.

- Inbound time spent in the queue before entering the BCP.
- Exact time for customs broker procedures, customs inspection, phyto-sanitary and veterinary inspections.

Process 1: Inbound weighing and Border Police Inspection

BRITE observers have registered six moments of times during this inbound process:

- The truck enters the BCP.
- The truck stops for BP inspection.
- The truck departures for weighing queue.
- The truck stops before the scale.
- The truck departures after passing the scale and after the driver got his papers.

In Table 1 are presented the average times per each sub-process, by BCPs and shows also the number of observations, which corresponds to the number of trucks observed during 12 hours, except Otaci, where the observations were made during 20 hours in total.

Table 1. Inbound weighing and BP inspection, minutes

BCP	Time to get to the BP inspection	BP inspection	Time in queue for weighing	Weighing	Observations
Otaci	3.0	10.2	11.4	2.1	**77**
Tudora	4.4	5.5	0.2	2.9	**63**
Leuseni	5.8	4.7	10.2	2.2	**84**
Sculeni	8.4	10.8	0.0	3.2	**70**
Total					**294**

Findings:

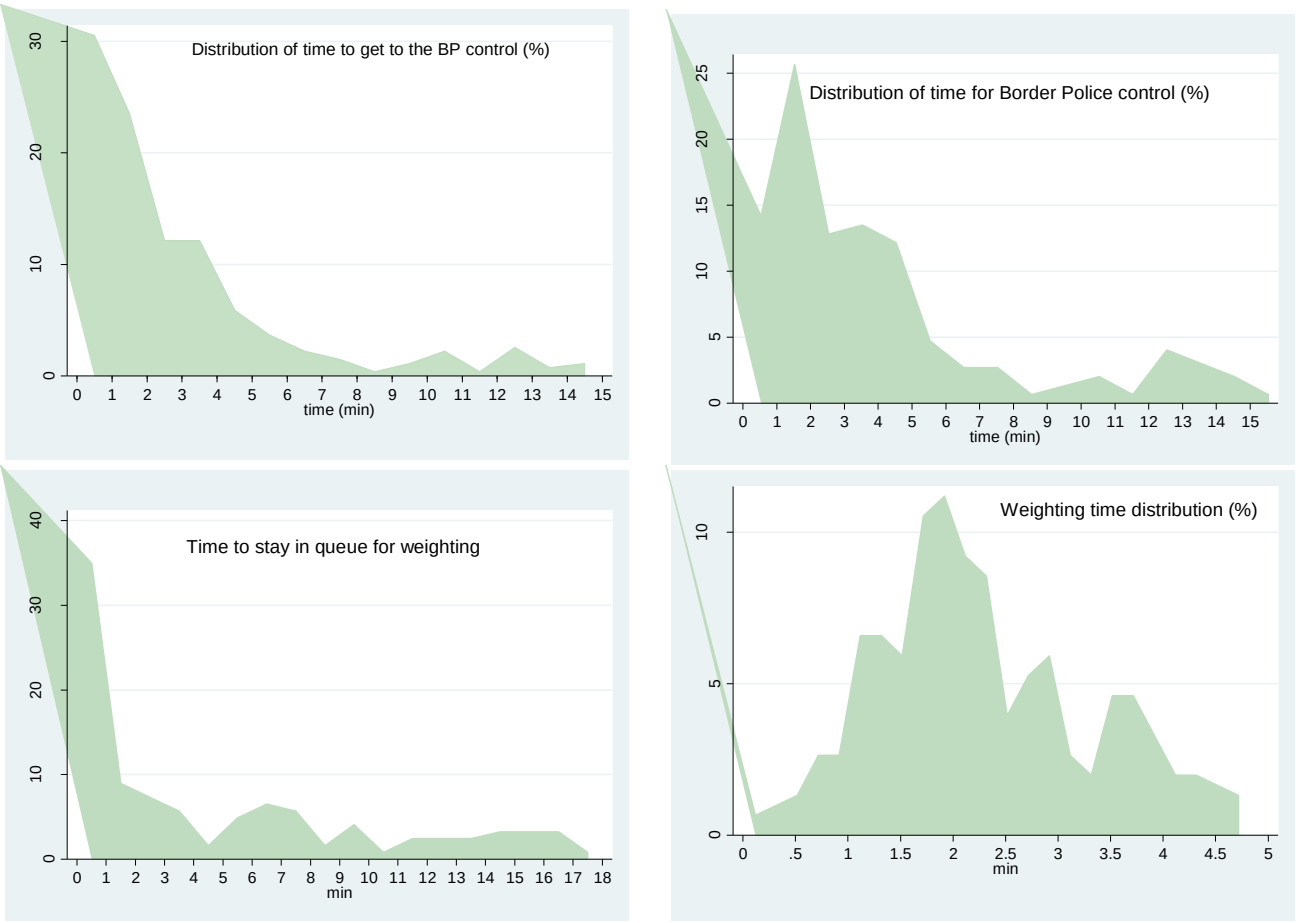
- The time to get to the BP inspection does not differ much between BCPs and depends on how the infrastructure is organized. Normally it is less than 9 min.
- The time for inspection by BP was about the same in Tudora and Leuseni – about 5 min, where there is higher traffic, and about 10-11 minutes at Otaci and Sculeni where fewer trucks enter the BCP.
- The queues for weighing were about 10-11 minutes at Leuseni and Otaci because of traffic (Leuseni) and infrastructure at Otaci, as the BCP has limited space for placing the trucks.
- The process of weighing does not differ much between BCPs, being somewhere between 2 and 3 minutes.

From the distribution standpoint, we have noticed the following: (Figures 1-4)

- In about 30% of cases, a truck spends less than one minute to get to the BP representative, after entering BCP. This time is up to 7 minutes in most cases; however, there are some isolated cases when this time can reach up to 15 minutes.

- About 25% of trucks pass the BP inspection in about 2 minutes. About 40% of trucks do it in about 3-5 minutes and about 14% in less than a minute. Other cases should be considered special, as it takes more time than usual to perform this activity.
- About 35% of trucks spend no time or less than one minute in the queue for weighing. Depending on the BCP, time of the day, traffic or weather conditions, in the other 65% cases, a truck can stay between 2 and about 18 minutes in the queue.
- The weighing process has an almost Normal statistical distribution with a peak around 2 minutes. This shows that in general, the process of weighing is not influenced by other factors and doesn't depend even on the BCP it is performed.

Figures 1, 2, 3, 4 Distribution of times for getting to the BP, BP inspection, queue for weighing and weighing, across all BCPs analyzed (%)



Process 2: Inbound Customs Procedures

This was the most time-consuming inbound process analyzed, our observers having registered information 12 hours a day during 7 consecutive days. Basically, for each truck, the following moments of time were registered:

- Time of arrival near the Customs building.

- Time of departure from the Customs building, after all customs procedures completed.
- If the truck passed a usual or AEO/EPD lane.

This information was completed with data provided by the customs inspectors, from whom we found out about the trucks, the load status (loaded or empty), the type of declaration, types of inspections performed and if the company was a holder of simplified procedures or not.

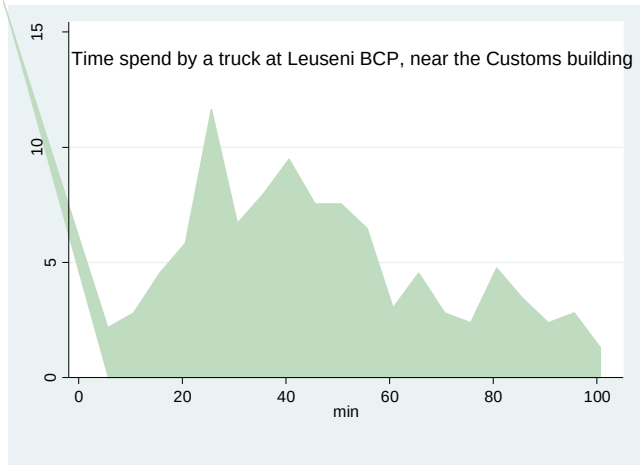
Table 2 Timing for inbound customs procedures, by BCP and type of declaration, minutes

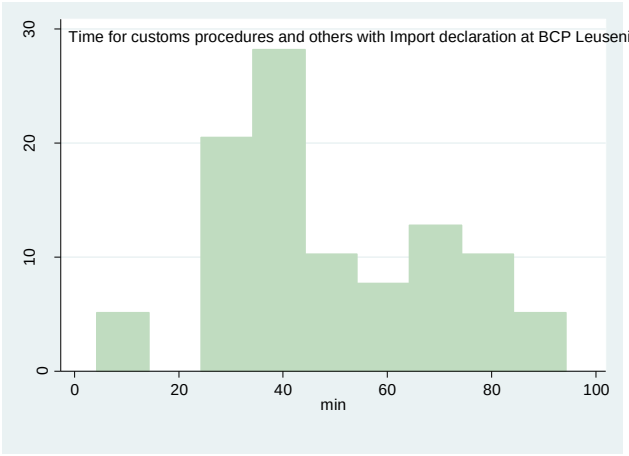
Type of declaration	Otaci BCP	Tudora BCP	Leuseni BCP	Sculeni BCP
Import (min)	**26.1**	**30.1**	**57.0**	**51.8**
Nr	1	18	44	8
T1 (min)	**29.7**	**26.0**	**75.0**	**49.3**
Nr	44	98	142	56
TIR (min)	**31.3**	**26.1**	**42.1**	**47.9**
Nr	15	58	133	21
Empty (min)	**55.0**	**12.0**	**44.7**	**9.8**
Nr	3	33	38	74

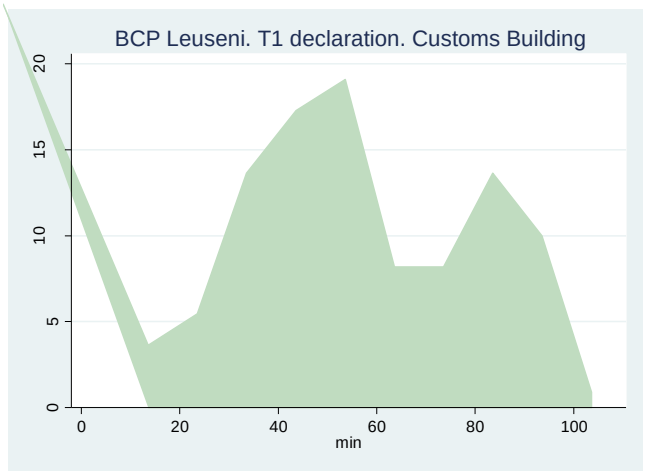
Findings:

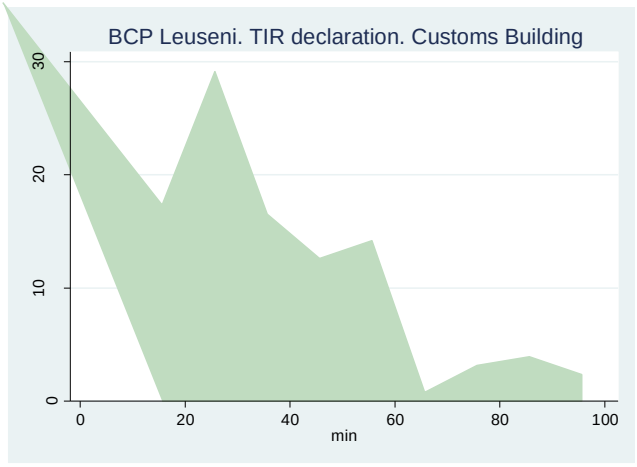
- For Otaci BCP, only the times for T1 and TIR declarations are relevant, as there are enough observations collected.
- Generally, the time spent by trucks with import type of declaration is comparable to the others, although in the 2013 study it was shown that there is a significant difference between these times. For instance, at Sculeni BCP, there is no difference regarding the time spent by a truck by the type of declaration presented.
- Empty trucks get in very quick at Tudora and Sculeni, however they would need to spend more time at Leuseni BCP.
- Generally the time for customs procedures depends more on the BCP and its infrastructure, than on other factors.

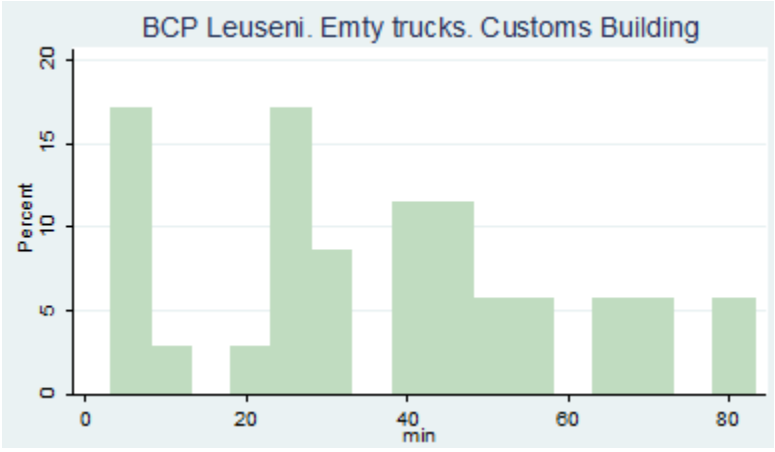
Figures 5, 6, 7, 8, 9 Distributions of inbound customs process times at Leuseni BCP, in general, and by the type of declarations (%)











Regarding the T1 declarations, we notice a normal distribution around 50 min, and also another distribution, with smaller amplitude, around 85 min. Most probably, these are trucks with additional inspections.

Most trucks with TIR declarations spend between 20 and 30 minutes for customs procedures, some of them between 40 and 60 and just a few, about 80-100 minutes.

Regarding the empty trucks, it is impossible to find a relevant average, as different empty trucks could spend different amounts of time starting with as low as 5-10 min and ending with 80 min or more. The distribution is almost even and is difficult to identify what exactly could explain this.

In the next part of this sub-section, the factors which could influence the inbound customs procedures time will be analyzed.

Phyto-sanitary and Veterinary Inspections

Depending on the type of goods transported, a truck could undergo phyto-sanitary and/or veterinary inspections. However, these inspections do not apply to all trucks and monitoring separately the times for these inspections is very difficult, first of all because of a small number of trucks which follow this procedure during a normal observation period of 4 hours, but also because physically it is not possible to determine the exact moment of time when the inspection started and when it ended. Because measuring these times seemed to be consuming, we used a different approach, by comparing the times for customs procedures which includes, where applicable, the times for these inspections of the normal trucks with no additional inspections and the trucks with one or two additional inspections. The averages are presented in the Table 3.

Table 3 Timing for inbound customs procedures, by BCP, load status and by type of additional inspections, minutes

Truck	Otaci		Tudora		Leuseni		Sculeni		Total	Total (%)
	Time	Trucks	Time	Trucks	Time	Trucks	Time	Trucks		
Empty	55.0	3	12.0	33	45.3	38	9.8	74	**148**	**19.3%**
Phyto-sanitary inspection	45.0	5	25.6	22	48.9	37	52.8	8	**72**	**9.4%**
Veterinary inspection	79.3	1	25.5	3	60.6	8	no obs	0	**12**	**1.6%**
Phyto-sanitary and veterinary inspection	no obs	0	24.4	7	50.9	5	100.4	1	**13**	**1.7%**
Loaded, no inspections	27.7	54	26.5	121	60.2	269	48.2	76	**520**	**68.0%**
Total		**63**		**186**		**357**		**159**	**765**	**100.0%**

From a total of 765 trucks monitored during this observation, 68% were loaded and had no phyto-sanitary or veterinary inspection, 19.3% were empty, and 9.4% had only phyto-sanitary inspection, 1.6% - only veterinary inspection and 1.7% - both types of inspections. From the data collected, there is no clear evidence that the trucks which had one of these inspections spent more time for customs procedures than those that do not. Also, it is difficult to say whether the trucks which had both types of inspection stayed longer. Some large differences in times between loaded trucks with and without inspection could not be explained statistically, as for the trucks with inspections, the number of observations was too low to consider the average being representative.

Passing the AEO/TIR EPD lane

Although at the time of data collection, no economic agent had an official AEO/TIR EPD status, a special lane was in place and used basically by the trucks of economic agents with simplified procedures and by empty trucks. Our assumption was that these inbound trucks should spend less time for customs procedures.

Key findings on the AEO/TIR EPD lane usage: (see Table 4)

- Two thirds of all 794 trucks observed were loaded trucks with no simplified procedures, which passed a usual lane at BCP.
- The empty trucks represent 19% of all trucks and most of them (74% of empty trucks or 14% of total) follow a usual lane, while the rest – AEO/TIR EPD lane.
- Only 13% of total observed trucks passed through the AEO/TIR EPD lane, which shows that it is less frequently used.
- An unusual aspect: more loaded trucks with simplified procedures passed the usual lane, rather than the AEO/TIR EPD lane. The proportion is 73% vs. 27%.
- The time the pass the AEO/TIR EPD lane is shorter than when passing through a normal lane. However this statement is not valid for loaded trucks without simplified procedures observed at Otaci BCP, but the means in that case are not comparable, as only 4 trucks were observed to pass the AEO/TIR EPD lane and 56 trucks – the usual lane.
- Only at Leuseni and Sculeni BCPs were registered enough SP holders to make a comparison of times. Thus, the empirical data show that for SP holders, passing the AEO lane is faster at Leuseni BCP, but it takes more time at Sculeni BCP.

Table 4 Timing for inbound customs procedures, by BCP, load status, SP and lane type, min

Indicator	Load status	SP	Otaci BCP		Tudora BCP		Leuseni BCP		Sculeni BCP	
			Usual	AEO	Usual	AEO	Usual	AEO	Usual	AEO
Time (min)	Empty	No	55.0	no obs	12.9	8.0	48.4	22.6	10.7	6.5
		Yes	no obs	no obs	no obs	no obs	58.7	no obs	no obs	no obs
	Loaded	No	29.9	32.1	26.9	21.3	62.6	47.9	52.6	9.5
		Yes	no obs	no obs	13.7	no obs	44.0	37.3	35.2	50.0
Trucks observed (nr.)	Empty	No	3	0	26	15	24	8	58	16
		Yes	0	0	0	0	7	0	0	0
	Loaded	No	56	4	168	5	248	36	63	1
		Yes	0	0	1	0	27	7	13	8

Weather conditions

The field operators registered if there were some weather conditions other than normal, like rain or wind, and we attempted to analyze whether these had an impact on the time for customs procedures. We were following the assumption that the weather conditions could have an impact on the speed of crossing the BCP, which proved true only at Leuseni BCP, were we had enough observations made with normal weather and with some rain and/or wind.

Table 5 Timing for inbound customs procedures, by BCP, load status and weather conditions, minutes

Truck	Weather	Otaci		Tudora		Leuseni		Sculeni		Total	Total (%)
		Time	Trucks	Time	Trucks	Time	Trucks	Time	Trucks		
Empty	Normal	55	3	13.1	30	19.2	10	9.8	75	118	14.8%
	Some rain/wind	no obs	0	5.6	11	54.8	29	no obs	0	40	5.0%
Loaded	Normal	30	60	26.3	102	57.7	208	49.2	85	455	57.0%
	Some rain/wind	no obs	0	26.6	74	60.7	111	no obs	0	185	23.2%
Total			**63**		**217**		**358**		**160**	**798**	**100.0%**

In Otaci and in Sculeni, the weather was clear all the time, while in Tudora there was significant difference between the times spent by loaded trucks for customs procedures, no matter the weather. Only in Leuseni we can state that due to the weather conditions, the empty trucks spent almost 3 times more compared to the trucks that circulated in normal weather conditions, and the loaded trucks stayed on average 3 minutes more.

In 72% of observations, the weather was clear and in 28% there was some wind and/or rain.

Overall

Considering all the observations collected during this process, no matter other individual factors described in the above sections, the average time, by the type of declaration only was between 20.1 minutes for empty trucks and 50.9 minutes for trucks with T1 declarations. Compared to the 2013 study, when the trucks with import declarations stayed much longer in the BCPs, in 2014, the difference between those with T1 and Import declarations almost leveled.

Table 6 Timing for inbound customs procedures, by BCP and type of declaration, minutes

Type of declaration	Customs procedures (min)	Nr. of trucks	Trucks (%)
Import	49.2	71	9%
T1	50.9	342	43%
TIR	37.8	227	29%
None	20.1	148	19%

For inbound trucks, most declarations are T1 – 43%, followed by TIR – 29% of total trucks, and only 9% represents clearance at the border. From the total, 19% are empty trucks with no declaration.

Process 3: Bank Office

This process was analyzed separately as there were rumors that drivers spend a lot of time for paying at the bank office. Like in 2013, this study shows that time spent in the queue is very low, on average, and the time spent at the bank office window is around 2 minutes, except Otaci BCP, where

the time was about twice as long. This process does not make difference between inbound or outbound drivers and even physical persons, as the window is the same for all persons.

Table 7 Time in queue and at bank office window, per person, by BCPs, minutes

BCP	Time in queue (min)	Time at Bank Office window (min)	Number of persons
Otaci	1.9	3.9	142
Tudora	1.0	2.2	72
Leuseni	1.1	1.5	193
Sculeni	0.1	1.5	31

Findings:

- At Sculeni BCP, virtually, there was no queue at the bank office during the observations, and only 31 persons were registered during 12 hours, which means that only a few drivers even had to pay something at BCP.
- Anywhere else the time of waiting in the queue was between 1 and 2 minutes, on average.
- At Leuseni and Sculeni, people were served faster, about 1.5 minutes on average, and more time a person had to spend at Otaci – almost 4 minutes on average.

Process 4: Outbound queue to enter the BCP

The results in 2014 were very different regarding the queues, compared to the 2013 study. For instance, if in 2013, there was virtually no queue at Otaci BCP and the traffic was low, in the 2014 study the situation changed dramatically. Also, the queue length at Leuseni BCP in 2013 was so long that it was not possible to measure it accurately and regularly, our estimations showing that it was more than 50 trucks long, while in 2014 the queue at Leuseni vanished. The average length was about 1 truck at a moment of time, which means that almost all incoming trucks were headed directly inside BCP. However, this caused problems inside the BCP itself for outbound trucks.

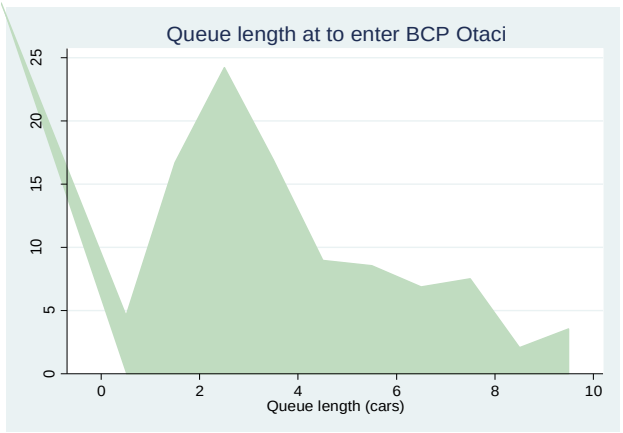
Table 8 Indicators characterizing the outbound queue to enter BCP and time of the day.

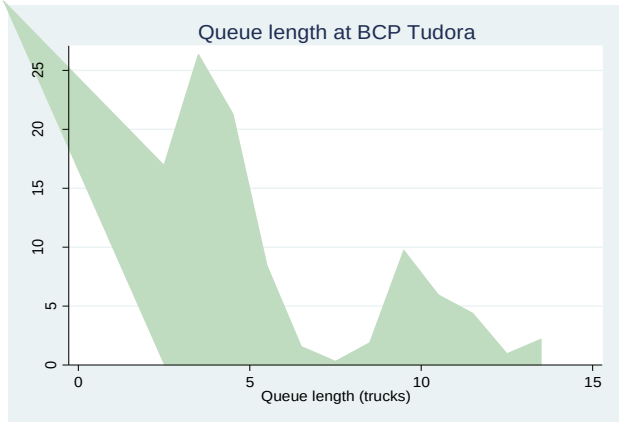
Time	Indicators	BCP			
		Otaci	Tudora	Leuseni	Sculeni
Morning	Queue length (trucks)	2.6	2.9	1.1	0.6
	Time in queue (min)	61.4	93.6	21.0	21.0
	Probability queue	89%	100%	100%	11%
	Average per truck (min)	54.9	93.6	21.0	2.4
Noon	Queue length (trucks)	4.6	4.7	2.8	1.0
	Time in queue (min)	97.3	65.5	10.7	24.0
	Probability queue	100%	100%	46%	6%
	Average per truck (min)	97.3	65.5	5.0	1.4
Evening	Queue length (trucks)	4.2	9.7	1.3	2.0
	Time in queue (min)	71.9	115.0	15.0	90.0
	Probability queue	100%	100%	83%	6%
	Average per truck (min)	71.9	115.0	12.5	5.3

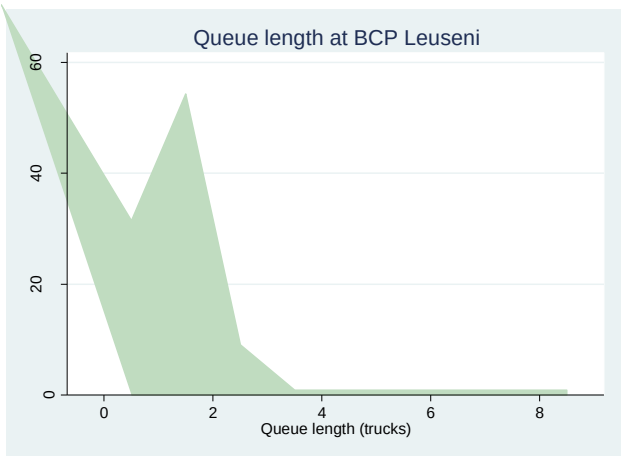
General average (min)	**74.7**	**91.4**	**12.8**	**3.0**

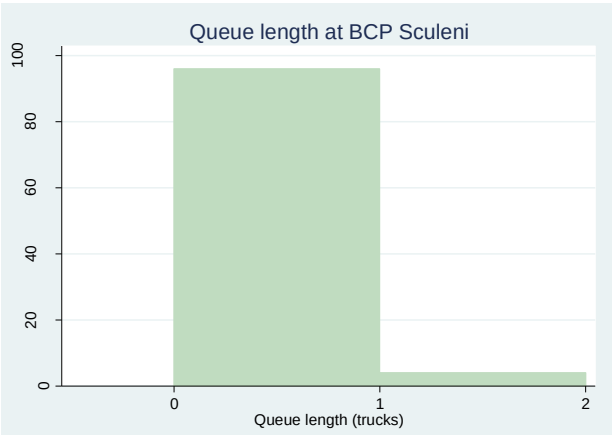
Due to a large number of trucks inside the BCP, each individual process took longer than usual. The time saved by not staying in the queue was compensated by additional time in queues for weighing and to pass the Border Police inspection and the Customs inspection. This situation affected more the empty trucks, which have not enjoyed a fast movement through the BCP.

Figures 10, 11, 12, 13 Distributions of the outbound queue length, by BCPs









Findings:

- At Sculeni BCP, there is the least probability to stay in queue to enter the BCP when leaving Moldova. In just 6-11% of cases, a truck had to stay in a queue.
- At Otaci and at Tudora BCPs there was a queue in almost all cases registered by BRITE observers. However, the queue at Leuseni BCP was very short in the morning, just in 46% cases in the noon and not in all cases in the evening. This result contrasts much with the observation made in 2013, when the longest queues were registered at Leuseni BCP.
- As a general average, including both trucks that both wait in queue and do not, it takes a truck 75 min to enter the BCP in Otaci, 91 min to enter the BCP in Tudora, about 13 minutes for the BCP from Leuseni and only 3 minutes for Sculeni BCP.

The figures above show that at Otaci BCP the queue is almost always present and has a distribution similar to Poisson[4], while at Tudora BCP it can be noticed that two different periods with a shorter and longer queue were observed. At BCP Leuseni, there was usually a short queue of 1-2 trucks, and at Sculeni BCP the queue virtually doesn't exists, only in less than 10% of cases the queue was just one truck.

Process 5: Outbound weighing

Due to the infrastructure specifics, for outbound trucks, the weighing was assessed separately, because BP inspection is made just before the customs inspection. Our measurements captured the times for getting into the queue, staying in the queue and weighing. As at Otaci BCP there is only one scale, this process was monitored separately only at other three BCPs.

Findings:

- At Otaci BCP there is only one scale for both entering and exiting Moldova.
- Usually, the time to weigh when exiting Moldova is less than when entering Moldova.
- Not all trucks are weighed, but the results can't provide a good proxy of the percent of weighed trucks.

Table 9 Indicators characterizing the outbound weighing process

BCP	Time to get to the queue	Time in queue	Time for weighing	Trucks (nr)
Tudora	2.4	4.6	2.0	92
Leuseni	0.3	5.2	2.6	131
Sculeni	0.8	1.9	3.0	48

Process 6: Outbound Customs Procedures and Border Police Inspection

Due to the BCPs' infrastructure for outbound trucks, the processes of Border Police Inspection and the Customs Procedures could have been monitored simultaneously by a single observer. Three moments of time were registered in the blank forms provided to observers: the moment when the truck approached for the Border Police inspection, the moment when the inspection ended and the moment when the truck departs. The difference of time between the last two moments represents the time spent for customs procedures, in particular for customs inspection, customs broker and bank office.

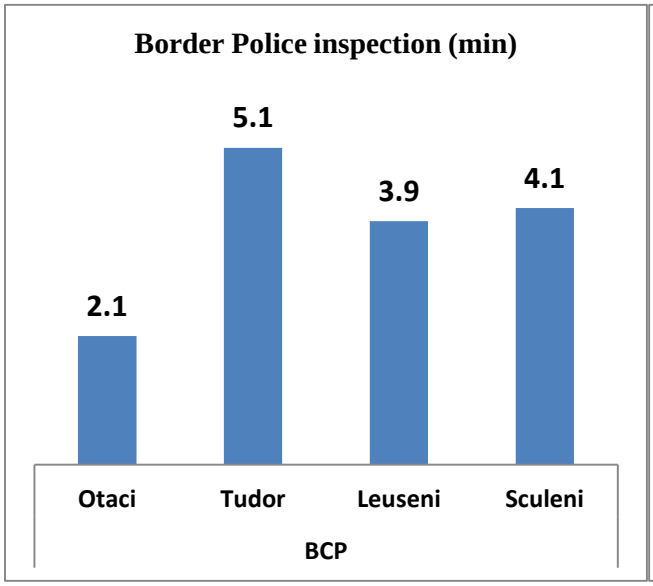
A particular interest for this assessment was to find out how much time a truck spends for customs procedures if it possesses an electronic customs declaration. The findings showed that in three out of four BCPs, Leuseni is an exception, the time spent by trucks with electronic customs declaration is longer than for any other cases, although the discrepancy is not significant.

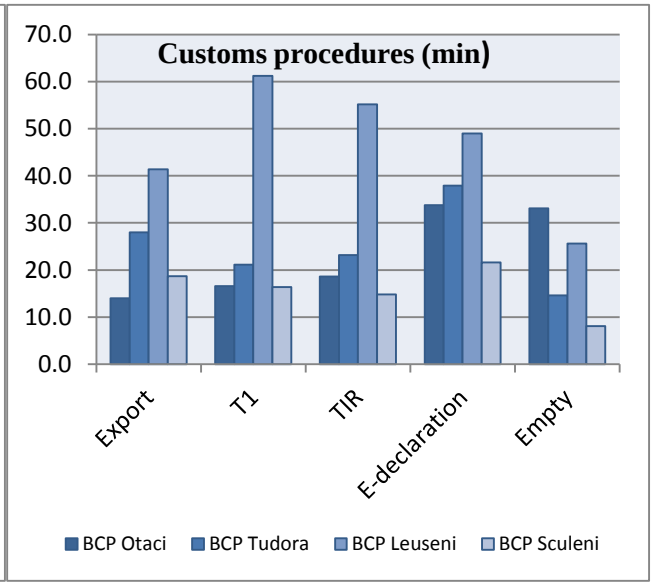
[4] The Poisson distribution in most cases show a high frequency of lower values, which gets to zero or almost zero shortly after the values are increasing.

Table 10 Outbound time for Border Police inspection and customs procedures, by BCP, minutes

Type of declaration	Indicator	BCP			
		Otaci	Tudora	Leuseni	Sculeni
Export	Border Police inspection	2.3	2.9	4.3	2.8
	Customs procedures	14.0	28.0	41.4	18.7
	Nr	18	124	34	10
T1	Border Police inspection	2.2	2.8	3.9	6.7
	Customs procedures	16.6	21.1	61.2	16.4
	Nr	20	82	42	123
TIR	Border Police inspection	2.0	3.5	3.4	3.5
	Customs procedures	18.6	23.2	55.2	14.8
	Nr	90	153	33	12
E-declaration	Border Police inspection	2.1	9.7	3.5	4.1
	Customs procedures	33.8	37.9	49.0	21.6
	Nr	80	26	59	43
Empty	Border Police inspection	1.7	6.6	4.5	3.5
	Customs procedures	33.1	14.6	25.6	8.1
	Nr	3	65	231	61

Figure 14, 10 Average duration of Border Police inspection by BCP (min) (right), Average duration of outbound customs procedures by BCP and type of declaration (min) (left)





Findings:

- When exiting Moldova, the Border Police inspection is faster at BCP Otaci – about 2 minutes on average, and about 4-5 minutes at other BCPs.
- There is no significant difference between times for Customs procedures, no matter T1 and TIR declarations. Also, there is no clear evidence that clearing at the border would be faster or slower than if having a T1 and TIR declarations.

- A lot of companies use e-export declarations, however, their trucks spend more time for customs procedures, except for Leuseni, where this time is faster compared to T1 and TIR declarations.
- The empty trucks stay the least amount of time at BCP Sculeni and most at BCP Otaci.

Figures 16, 17, 18, 19 Time distribution of the outbound customs procedures for e-export declarations, by each of four BCPs (min, %)

Regarding the electronic export declaration, the fastest time for customs procedures when exiting Moldova was registered at Sculeni, where most of the trucks spent for customs procedures less than 25 minutes, while at Tudora the same procedure took less than 50 minutes for most trucks, with a similar situation at Leuseni. At Otaci BCP, the time is somewhere between 15 and 35 minutes.

Process 7: X-ray Scanning when Leaving Moldova

Our research found out that X-ray Scanning is a real issue only at Leuseni, where almost all loaded trucks are scanned, while at Otaci BCP there is no scanner, and at Tudora BCP and Sculeni BCP it is used much less frequently. The time to scan includes both the time a truck stays in the queue, waiting for the scanning process to start, the scanning itself and the time to get documents. Basically, BRITE observers looked for two moments of time: when the truck approached the scanning area and

the time it left. Thus, the trucks which came first, stayed longer and the last ones – stayed less, and the average shows what would be an average time for all trucks.

Table 11 Average time to scan a truck and the estimated average for all trucks, by BCPs

BCP	Time to scan (min)	Nr. of trucks	Estimated average for all trucks* (min)
Tudora	18.0	5	1.8
Leuseni	19.1	74	19.1
Sculeni	13.9	13	5.1

* - based on the probability to be scanned and time to scan

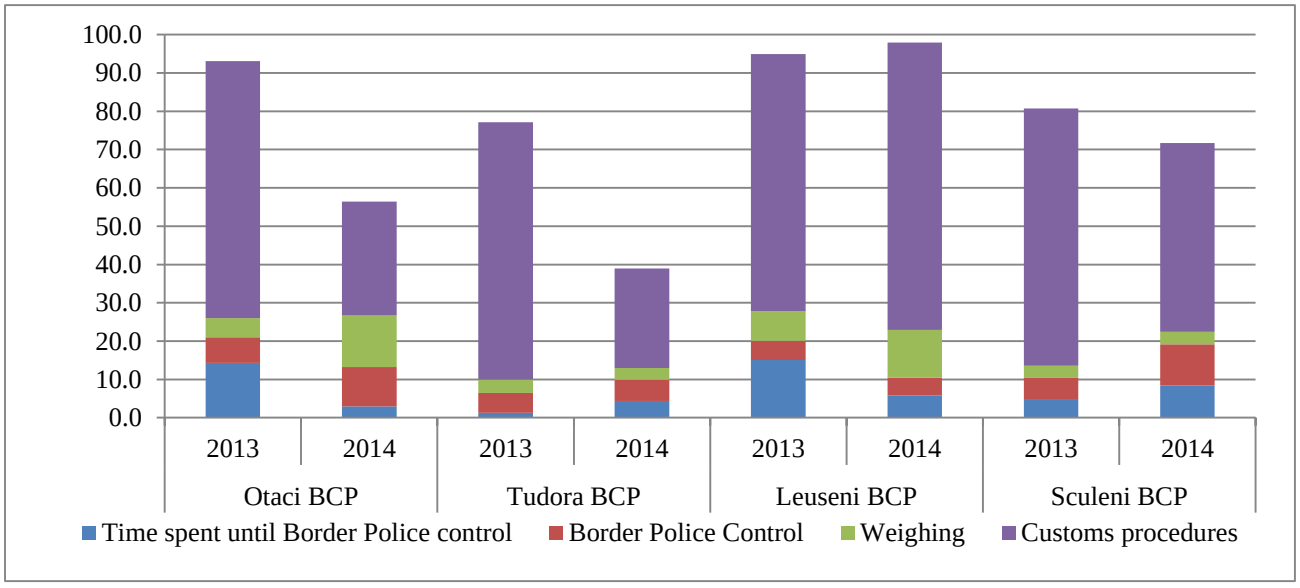
Findings:

- There is no X-ray scanner at Otaci BCP.
- Compared to the 2013 study, a considerably smaller number of trucks have been scanned.
- We estimate that at Sculeni BCP only about 10% of trucks are scanned; at Tudora BCP – 37%, and almost all trucks are scanned at Leuseni BCP.

Comparative timing analysis of trucks with T1 declarations, 2013-2014

As T1 type of declaration remains the most common for both imports and exports, we will illustrate a comparative analysis of the time spent at BCPs by the trucks with T1 declarations in 2014 and in 2013, by BCPs.

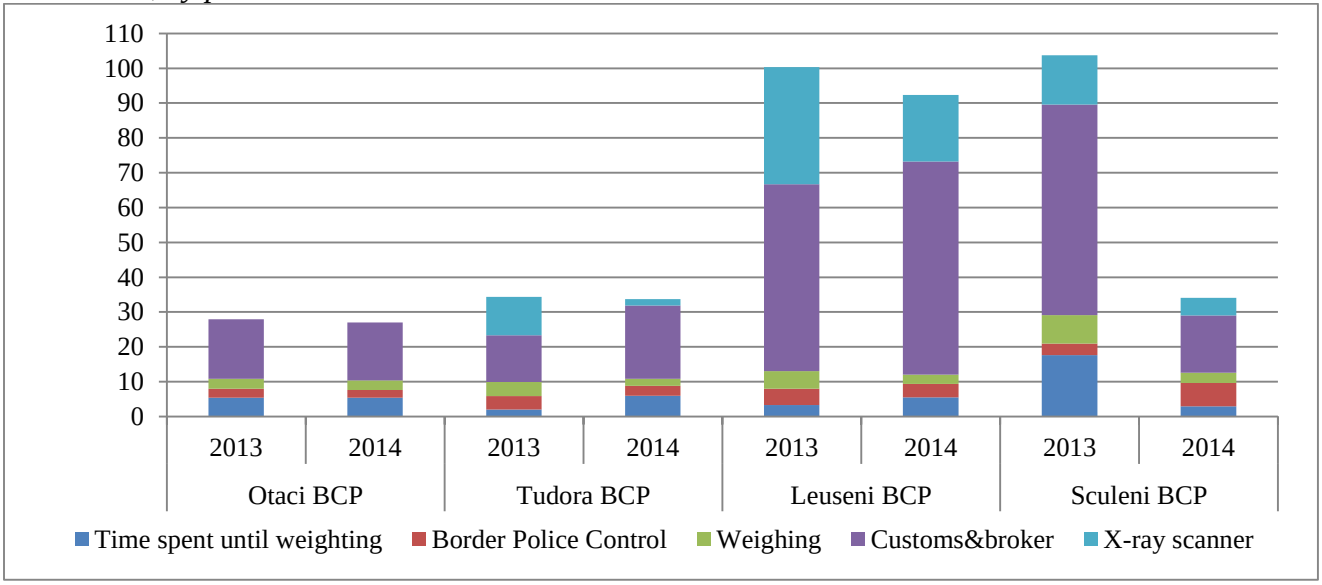
Figure 11 Average time spent by an inbound truck in a BCP, in 2013 and in 2014, on a T1 declaration, by processes



We notice that, overall, the time spent in BCPs by trucks decreased in 2014, compared to the previous study in 2013, with the exception of Leuseni BCP, where it slightly increased (5 minutes)

due to longer periods spent in the queue for weighing and with customs procedures. At Tudora BCP, the average time decreased significantly, by almost half, with a similar situation at Otaci BCP. The fastest time for the trucks with T1 declaration was registered in both 2013 and 2014 at Tudora BCP – 77.1 and 39.0 min respectively. Our field observers noticed that some of the procedures at Tudora BCP are made while the inbound truck stays in the queue to enter the BCP, but we could not monitor this process to estimate how much time these trucks spend before entering.

Figure 12 Average time spent by an outbound truck in a BCP, in 2013 and 2014, on a T1 declaration, by processes



For all BCPs, an improvement of the time spent by outbound trucks was registered. In the above figure we have not included the queue, the length of which is very different depending on various factors. In 2013, the lowest times were registered at Tudora BCP and Otaci BCP and these times improved slightly in 2014. At Leuseni there is a small improvement, but it remains the BCP were the trucks with T1 declaration stay longer than in any other place. The biggest improvement was registered at Sculeni BCP, where the total time observed dropped from 118 minutes to just 37 minutes. This result could be partially explained by a lower number of trucks at Sculeni BCP, which could make the average not representative.

Comments from the Field Observers

BRITE field monitors were asked to provide their own observations about the processes they observed at each BCP over the course of 28 days. These are organized by BCPs. Most comments reflect the current situation, rather than recommendations.

Otaci BCP:

- The BCP is situated near the market and the railway station, which makes the traffic more difficult and it is generally noisy.

- The space is very small for all processes to be made accordingly. The trucks and the passenger buses use the same lane, which increases the time spent at BCP.
- When the outbound queue is over 7-8 trucks, the circulation in and near the BCP becomes very difficult.
- The customs inspectors and border policemen do not inspect all the trucks.
- The inbound and outbound queues do not get too long due to the efficiency of the work of Customs Service and Border Police representatives.

Tudora BCP:

- There was at least one situation when an inspector had difficulties to weigh the trucks and they had to pass over the scale several times.
- The consecutiveness of the procedures is more clear here and more efficient. The customs inspectors make even more detailed inspections in less time compared to other BCPs.
- The presence of EUBAM mission here could explain an increased efficiency. But also the infrastructure is crucial in reducing the time to cross the BCP.

Leuseni BCP:

- Although the queues observed were very short to enter the BCP, there were a lot of trucks inside the BCP, which creates some difficulties.
- The field operator noticed up to 30 outbound trucks inside the BCP at one time.
- Due to the large amount of outbound trucks inside BCP, the border policemen don't approach the truck quickly, and it can add up to 30 minutes of wait time.
- The verification of the truck usually resumes only with registration in the data base
- During peak hours, additional customs inspectors come to help their colleagues, which might diminish the quality of work. Sometimes the head of the customs post was coordinating the repartition of trucks by lanes.
- Customs inspectors did not always fill out the forms provided by BRITE, which decreased the number of observations collected.
- Sometimes the queues of the outbound trucks for the Border Police inspections are huge.

Sculeni BCP:

- The traffic is light here, but sometimes one or two additional customs inspectors are brought in for assistance.
- The placement of X-ray scanner is poor, and the trucks enter and exit with difficulty from the scanning zone.
- Sometimes, the trucks use the AEO lane, in order to avoid queues and to decrease the time for customs procedures.
- The empty trucks leave the BCP very quick, compared to other BCPs.
- The X-ray scanning is done for outbound trucks immediately after entering the BCP.

Overall:

- Some observers consider that the customs inspectors and border policemen work faster because of the presence of BRITE team of observers.
- Each BCP is different in the way it operates, in the infrastructure and the staffing. This makes the times for same procedures different across BCPs.

Annex 1. Inbound timing in 2014, 2013, and the % change

Procedure	Period	Otaci BCP				Tudora BCP				Leuseni BCP				Sculeni BCP			
		Empty	Type of declaration			Empty	Type of declaration			Empty	Type of declaration			Empty	Type of declaration		
			T1	TIR	Import		T1	TIR	Import		T1	TIR	Import		T1	TIR	Import
Time until Border Police inspection	2014	**3.0**	**3.0**	**3.0**	**3.0**	**4.4**	**4.4**	**4.4**	**4.4**	**5.8**	**5.8**	**5.8**	**5.8**	**8.4**	**8.4**	**8.4**	**8.4**
	2013	14.3	14.3	14.3	14.3	1.3	1.3	1.3	1.3	15.1	15.1	15.1	15.1	4.9	4.9	4.9	4.9
	Change %	*-79%*	*-79%*	*-79%*	*-79%*	*238%*	*238%*	*238%*	*238%*	*-62%*	*-62%*	*-62%*	*-62%*	*71%*	*71%*	*71%*	*71%*
Border Police inspection	2014	**10.2**	**10.2**	**10.2**	**10.2**	**5.5**	**5.5**	**5.5**	**5.5**	**4.7**	**4.7**	**4.7**	**4.7**	**10.8**	**10.8**	**10.8**	**10.8**
	2013	6.7	6.7	6.7	6.7	5.2	5.2	5.2	5.2	5.0	5.0	5.0	5.0	5.5	5.5	5.5	5.5
	Change %	*52%*	*52%*	*52%*	*52%*	*6%*	*6%*	*6%*	*6%*	*-6%*	*-6%*	*-6%*	*-6%*	*96%*	*96%*	*96%*	*96%*
Weighing	2014	**13.5**	**13.5**	**13.5**	**13.5**	**3.1**	**3.1**	**3.1**	**3.1**	**12.4**	**12.4**	**12.4**	**12.4**	**3.2**	**3.2**	**3.2**	**3.2**
	2013	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5	7.7	7.7	7.7	7.7	3.2	3.2	3.2	3.2
	Change %	*170%*	*170%*	*170%*	*170%*	*-11%*	*-11%*	*-11%*	*-11%*	*61%*	*61%*	*61%*	*61%*	*0%*	*0%*	*0%*	*0%*
Customs procedures	2014	**55.0**	**29.7**	**31.3**	**26.1**	**12.0**	**26.0**	**26.1**	**30.1**	**44.7**	**75.0**	**42.1**	**57.0**	**9.8**	**49.3**	**47.9**	**51.8**
	2013	14.1	67.1	37.8	109.1	10.9	67.1	37.8	109.1	35.0	67.1	37.8	109.1	16.6	67.1	37.8	109.1
	Change %	*290%*	*-56%*	*-17%*	*-76%*	*10%*	*-61%*	*-31%*	*-72%*	*28%*	*12%*	*11%*	*-48%*	*-41%*	*-27%*	*27%*	*-53%*
Bank (queue)	2014	**1.9**	**1.9**	**1.9**	**1.9**	**1.0**	**1.0**	**1.0**	**1.0**	**1.1**	**1.1**	**1.1**	**1.1**	**0.1**	**0.1**	**0.1**	**0.1**
	2013	0.0	2.3	2.3	2.3	0.0	1.7	1.7	1.7	0.0	0.6	0.6	0.6	0.0	0.5	0.5	0.5
	Change %		*-17%*	*-17%*	*-17%*		*-41%*	*-41%*	*-41%*		*83%*	*83%*	*83%*		*-80%*	*-80%*	*-80%*
Bank (procedure)	2014	**3.9**	**3.9**	**3.9**	**3.9**	**2.2**	**2.2**	**2.2**	**2.2**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**
	2013	0.0	2.1	2.1	2.1	0.0	1.8	1.8	1.8	0.0	0.6	0.6	0.6	0.0	1.6	1.6	1.6
	Change %		*86%*	*86%*	*86%*		*22%*	*22%*	*22%*		*150%*	*150%*	*150%*		*-6%*	*-6%*	*-6%*
BCP	2014	**68.2**	**56.4**	**58.0**	**52.8**	**21.9**	**39.0**	**39.1**	**43.1**	**55.2**	**97.9**	**65.0**	**79.9**	**29.0**	**71.7**	**70.3**	**74.2**
	2013	35.1	93.1	63.8	135.1	17.4	77.1	47.8	119.1	55.1	94.9	65.6	136.9	27.0	80.7	51.4	122.7
	Change %	*94%*	*-39%*	*-9%*	*-61%*	*26%*	*-49%*	*-18%*	*-64%*	*0%*	*3%*	*-1%*	*-42%*	*7%*	*-11%*	*37%*	*-40%*

Annex 2. Timing for exporting from Moldova, at BCPs

Procedure	Period	Otaci BCP					Tudora BCP					Leuseni BCP					Sculeni BCP				
		Empty	Type of declaration				Empty	Type of declaration				Empty	Type of declaration				Empty	Type of declaration			
			T1	TIR	Export	e-Export		T1	TIR	Export	e-Export		T1	TIR	Export	e-Export		T1	TIR	Export	e-Export
Queue	**2014**	**74.4**	**74.4**	**74.4**	**74.4**	**74.4**	**91.4**	**91.4**	**91.4**	**91.4**	**91.4**	**12.8**	**12.8**	**12.8**	**12.8**	**12.8**	**3.0**	**3.0**	**3.0**	**3.0**	**3.0**
	2013	0.0	0	0			19	19	19			113	113	113			14.0	14.0	14.0		
	change (%)						*381*	*381*	*381*			*-89*	*-89*	*-89*			*-79*	*-79*	*-79*		
Time spent until weighing	**2014**	**5.4**	**5.4**	**5.4**	**5.4**	**5.4**	**6.0**	**6.0**	**6.0**	**6.0**	**6.0**	**5.5**	**5.5**	**5.5**	**5.5**	**5.5**	**2.9**	**2.9**	**2.9**	**2.9**	**2.9**
	2013	5.4	5.4	5.4			2	2	2			3.3	3.3	3.3			17.6	17.6	17.6		
	change (%)	*0*	*0*	*0*			*200*	*200*	*200*			*67*	*67*	*67*			*-84*	*-84*	*-84*		
Weighing	**2014**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**3.0**	**3.0**	**3.0**	**3.0**	**3.0**
	2013	2.8	2.8	2.8			4	4	4			5	5	5			8.2	8.2	8.2		
	change (%)	*0*	*0*	*0*			*-50*	*-50*	*-50*			*-48*	*-48*	*-48*			*-63*	*-63*	*-63*		
Border Police inspection	**2014**	**1.7**	**2.2**	**2**	**2.3**	**2.1**	**6.6**	**2.8**	**3.5**	**2.9**	**9.7**	**4.5**	**3.9**	**3.4**	**4.3**	**3.5**	**3.5**	**6.7**	**3.5**	**2.8**	**4.1**
	2013	2.6	2.6	2.6			3.9	3.9	3.9			4.7	4.7	4.7			3.3	3.3	3.3		
	change (%)	*-35*	*-15*	*-23*			*69*	*-28*	*-10*			*-4*	*-17*	*-28*			*6*	*103*	*6*		
Customs procedures	**2014**	**33.1**	**16.6**	**18.6**	**14.0**	**33.8**	**14.6**	**21.1**	**23.2**	**28**	**37.9**	**25.6**	**61.2**	**55.2**	**41.4**	**49**	**8.1**	**16.4**	**14.8**	**18.7**	**21.6**
	2013	19	17.1	32.1			11.2	13.4	15.9			39.7	53.7	50.9			30.1	60.5	50.9		
	change (%)	*74*	*-3*	*-42*			*30*	*57*	*46*			*-36*	*14*	*8*			*-73*	*-73*	*-71*		
X-ray scanner	**2014**						**1.8**	**1.8**	**1.8**	**1.8**	**1.8**	**19.1**	**19.1**	**19.1**	**19.1**	**19.1**	**5.1**	**5.1**	**5.1**	**5.1**	**5.1**
	2013						11.1	11.1	11.1			33.6	33.6	33.6			14.1	14.1	14.1		
	change (%)						*-84*	*-84*	*-84*			*-43*	*-43*	*-43*			*-64*	*-64*	*-64*		
BCP (with queue)	**2014**	**109.2**	**101**	**103**	**98.9**	**118.5**	**112.6**	**125**	**128**	**132.1**	**148.8**	**42.9**	**105**	**98.6**	**85.7**	**92.5**	**14.6**	**37.1**	**32.3**	**35.5**	**39.7**
	2013	21.6	27.9	42.9	0	0	34.1	53.4	55.9	0	0	157.4	213	211	0	0	47.4	118	108	0	0
	change (%)	*406*	*263*	*141*			*230*	*134*	*129*			*-73*	*-51*	*-53*			*-69*	*-68*	*-70*		
BCP (no queue)	**2014**	**34.8**	**27**	**28.8**	**24.5**	**44.1**	**21.2**	**33.7**	**36.5**	**40.7**	**57.4**	**30.1**	**92.3**	**85.8**	**72.9**	**79.7**	**11.6**	**34.1**	**29.3**	**32.5**	**36.7**
	2013	21.6	27.9	42.9	0	0	15.1	34.4	36.9	0	0	44.4	100.3	97.5	0	0	33.4	103.7	94.1	0	0
	change (%)	*61%*	*-3%*	*-33%*			*40%*	*-2%*	*-1%*			*-32%*	*-8%*	*-12%*			*-65%*	*-67%*	*-69%*		

Annex 3. BCP timing questionnaire

Nr. of truck cabin	
AEO/TIR EPD	**YES** ◯ **NO** ◯
Camion cu marfă	**YES** ◯ **NO** ◯
INBOUND	**OUTBOUND**
Type of declaration:	**Type of declaration:**
Import ◯	Export ◯
T1 ◯	T1 ◯
TIR ◯	TIR ◯
Electronic import ◯	Electronic export ◯
Additional inspections:	
Phyto-sanitary ◯	
Veterinary ◯	
(filled by the operator)	
Date:	Form nr.: